determining a maximum averaged peak-to-mean ratio;

determining a minimum averaged peak-to-mean ratio;

determining [a first result being] a difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio for the current audio frame;

determining [a second result being] a difference between the maximum averaged peak-to-mean ratio and the minimum averaged peak-to-mean ratio; and

conducting a ratio [between the first result and the second result to produce the peak-to-mean likelihood ratio], a denominator of the ratio being the difference between the maximum averaged peak-to-mean ratio and the minimum averaged peak-to-mean ratio, the numerator being the difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio.

7. (Amended) A communication module comprising:

a substrate;

a processing unit placed on the substrate; and

a memory coupled to the processing unit, the memory to contain a voice activity detector which, when executed by the processing unit, analyzes a short-term averaged energy, a long-term averaged energy, and a normalized peak-to-mean likelihood ratio in order to determine whether a current audio frame represents voice or silence.

13. (Amended) A machine readable medium having embodied thereon a computer program for processing by a machine, the computer program comprising:

a first routine for determining a normalized peak-to-mean likelihood ratio; and

a second routine for comparing the peak-to-mean likelihood ratio to a selected threshold to determine whether an audio frame being transmitted represents a voice signal.

18. (Amended) A voice activity detector comprising:

circuitry to determine a short-term averaged energy for an audio frame;

circuitry to determine a long-term averaged energy for the audio frame;

circuitry to determine whether the short-term averaged energy is greater than the long-term averaged energy by a predetermined factor;

circuitry to determine whether a difference between the long-term averaged energy and the short-term averaged energy is less than a predetermined threshold when the short-term averaged energy is greater than the long-term averaged energy by the predetermined factor;

circuitry to determine a normalized peak-to-mean likelihood ratio when the difference between the long-term averaged energy and the short-term averaged energy is less than the predetermined threshold; and

circuitry to comparing the peak-to-mean likelihood ratio to a selected threshold and to determine that the audio frame represents a voice signal when the peak-to-mean likelihood ratio is greater than a selected threshold.